Determination of Public Land (Rangeland) Health for 65056 L A RANCH

The Record of Decision (ROD) for the New Mexico Standards for Public Land Health and Guidelines for Livestock Grazing Management (dated January 2001) adopted three Standards for Public Land Health. These are (1) Upland Sites Standard, (2) Biotic Communities, Including Native, Threatened, Endangered, and Special Status Species Standard and (3) Riparian Sites Standard.

The ROD also established a process for the BLM Field Offices for the implementation. Through a public participation process, the Roswell Field Office developed and adopted indicators to use in conjunction with existing monitoring data to assess these standards.

Field assessment worksheets and other available data that evaluate the local indicators were completed for this allotment. Based on the assessments, it is my determination that the public land within the LA Ranch allotment #65056 sites BM147 and HW121 meet the Upland Sites standard and (2) Biotic Communities, including Native, Threatened, Endangered and Special Status Species standard. The HW122 site does not meet the Upland Sites standard and (2) Biotic Communities, including Native, Threatened, Endangered and Special Status Species standard. There are no public land riparian areas on this allotment, therefore this standard was not addressed.

/s/ T. R. KREAGER	08/04/2004
Assistant Field Manager	Date

Standards of Public Land Health
Evaluation of 65056 L A RANCH Allotment
[01/13/2004]

The Roswell Field Office conducted rangeland health assessments at three (3) study sites within the LA Ranch Allotment #65056. The assessments looked at the Soil/Site Stability, Hydrologic Function and Biotic Integrity indicators within the vicinity of each study site. Existing monitoring data was incorporated into and in support of the field assessment. The summary of each assessment is attached and shown in the following table.

Study Area or Assessment Area	UPLAND			BIOTIC			RIPARIAN		
	Meets	Monitor an Indicator	Does Not Meet	Meets	Monitor an Indicator	Does Not Meet	Meets	Monitor an Indicator	Does Not Meet
65056-BM147-C047 (*)	X			X			N/A		
65056-HW121-C048	X			X			N/A		
65056-HW122-C049 (*)		*	X		*	X	N/A		

Twenty-two (22) indicators for Rangeland Health were evaluated for the public land on the L A Ranch #65056. Ten (10) of these assessed soil site stability, 11 hydrologic function and 13 biotic integrity. These qualitative assessments in conjunction with quantitative information gathered from previous data collected on 3 locations were utilized to assess the rangeland health of the public land within the allotment. This allotment is in the "C" (custodial) category due to the small amount of public land present..

The continued dry conditions occurring over the last several years have impacted this allotment and surrounding area. BM pasture, a SD-3 Loamy ecological site has 90 acres/41 hectares of public land off the L A Ranch county road. The soil phase is Reeves-Holloman association. The association occurs on uplands paralleling the east side of the Pecos River with slopes 0-5 percent. No livestock were observed at the time of assessment. However oil and gas pads can be observed on the proximate state and private sections leading to the site. A majority of the indicators assessed rated Slight to Moderate and 4 rated None to Slight. Bareground exceeds the upper end of the range expected for the ESD. The estimated amount is 70-80 percent. The hydrologic attribute, plant community and distribution relative to infiltration and runoff rates at Moderate. Plant cover changes have negatively affected infiltration, due to a change in functional/structural groups which also rated Moderate. The grama (Bouteloua spp.)

species are missing. This coupled with a shift to a shrub dominated community made up of creosote (Larrea tridentata), javelinabush (Condalia spp.), prickly pear (Opuntia spp.) and mesquite (Prosopis glandulosa) has led to this rating. Litter amount falls below the bottom end of the range expected and rates Moderate to Extreme. Termites have had an impact on the plants and litter, on the ground or standing dead. Annual production is approximately 1/4 of the ESD, at 300 lbs/ac or kg/ha. The drier conditions have contributed to the drop in production. This indicator therefore rates Moderate to Extreme. Creosote can be observed scattered throughout and contributes to the invasive plants indicator Moderate rating. The reproductive capability of perennial plants is limited. Seed head and tiller formation has been somewhat curtailed due to the encroachment of shrubs and unfavorable climate. Tobosa (Pleuraphis mutica) and burrograss (Scleropogon brevifolius) are the principal grass species on site and their capability to reproduce has been limited. This indicator rates at Moderate. Physical crusting is evident however and appears to be holding the topsoil in place. Some breakage in it's continuity has led to a rating of Slight to Moderate for this indicator.

HW121 pasture is situated in a tobosa swale area with some small sinkhole areas.This site also classifies as SD-3 loamy and encompasses 20 acres/9 hectares. The soil phase is a Reeves-Holloman association and there appears to be no livestock utilizing this pasture. This site is dominated by tobosa and burrograss with some bareground patches. There is active oil and gas operations surrounding the site. The site is adjacent to a reclaimed state well which has vegetated rather satisfactorily. All indicators except for 3 rated Slight to Moderate. These 3 are rills, compaction layer and invasive plants. All 3 rated None to Slight. There are no signs of active headcuts, nickpoints or bed erosion which may be expected with the depressional areas. Annual production rates Moderate. Tobosa and burrograss make up most of the production which is estimated to be 600 lbs/ac or kg/ha. This is 60% of potential. A physical crust can be observed and is fairly uniform. This indicator rates Slight to Moderate.

The HW122 pasture is a SD-3-sandy ecological site on 90 acres or 41 hectares. However the soil phase is a Pajarito-Pintura complex which occurs on uplands and fans below indurated caliche breaks east of the Pecos River. Slopes are 1 to 15 percent. This soil consists of severely eroded fine sandy loam soil and Pintura loamy fine sand. No grazing was observed at the time of assessment. The percentage of bareground was consistently estimated at 100%. Large patches were observed completely denuded of vegetation. The only ground cover is mesquite and the occasional annual forb. The bareground indicator rates Extreme and doubles that allowed for the ESD. Gullies rate Moderate to Extreme with active erosion taking place on the northern end of the site. Vegetation is very sparse and intermittant on slopes. Common with mesquite infested sites, are wind-scoured blowouts and depositional areas. The wind has appeared to create sheet erosion between mesquite dunes resulting in this soil attribute rating Moderate. Litter movement rates Moderate as the litter is primarily mesquite leaves in scattered concentrations against the coppice dunal formations and under the canopy.

Soil surface resistance to erosion rates Moderate to Extreme as the soil site stability test indicates. Resistance is greatly reduced under the plant canopies and interspaces. There

has been some soil loss from the A-horizon as evidenced by little or no organic matter content.. Gravel and pebbles have migrated toward the surface. Soil surface loss rated Moderate. Although the last datum collected was in 1977, presently the site shows an encroachment of mesquite dominating over time. There was record of perennial grass cover and production. At present the mesquite cover has adversely affected infiltration and increased runoff. There is lack of fibrous root systems to improve infiltration rates and slow down or reduce runoff. With brush dominated sites, this taprooting characteristic detrimentally compromises water holding capacity. Sediment and nutrient loss is the result. The threshold has been exceeded in regards to grassland retrogressing to a shrub dominated matrix. Moderate to Extreme is the rating assigned to plant community composition and distribution relative to infiltration and runoff. There is virtually no plant diversity and functional/structural groups rated Extreme. Percent litter falls below the bottom end of the range expected. Termites have utilized whatever litter was present and are now using the mesquite leaves which is the only form of litter observed. This indicator rates Moderate to Extreme. Annual production rates Extreme as there is none except for mesquite. Invasive plants rate Extreme with mesquite dominating the site. Because of the site being devoid of perennial grass, which was recorded in the 1977 observation, the reproductive capability of perennial plants to reproduce is limited and rates Moderate. The physical crusting may be the only soil attribute holding the soil in place at this time. A rating of Slight to Moderate was given to this indicator.

Hydrology - Pasture BM 147 - The bareground indicator rated as moderate to extreme. The amount of bareground has possibly increased due to recent dry conditions and also wind and water erosion processes. The plant community composition and distribution relative to infiltration and runoff rated as moderate. The recent dry conditions or drought have possibly increased the amount of conversion of grassland to shrubland which has reduced infiltration and increased runoff. The litter amount rated in the moderate to extreme category. The decrease in litter amount suggests that the dry conditions have had a negative affect on the growing conditions which decreases the amount of litter that is produced. Additionally, the decrease in litter amount can have the effect of increasing the amount of bare soil. All other indicators rated as none to slight or slight to moderate. Sand and gravel deposits of Quaternary pediment deposits and gypsum and dolomite of the Yates Formation outcrop in the area.

Pasture HW 121 - All indicators rated either as none to slight or slight to moderate. Sand and gravel deposits of Quaternary pediment deposits outcrop in the area.

Pasture HW 122 - The bareground indicator rated as extreme. The amount of bareground has possibly increased due to recent dry conditions and also wind and water erosion processes. The gullies indicator rated moderate to extreme with active erosion and gully formation taking place. The increase in gullies has occurred because vegetation is very sparse and intermittent on slopes. The lack of vegetation has decreased infiltration and increased runoff. The wind scoured, blowouts, and or deposition area indicator rated out as moderate. The decrease in the strength of the physical soil crusts and or the absence of soil crusts, wind velocity, surface dryness, surface roughness, and the decreased amount of surface plant cover has possibly increased the amount of wind-scoured, blowouts and

deposition areas in the area. The litter movement indicator rated in the moderate category. Litter is almost absent from the site. The only litter occurring at the site was mesquite leaves. The decrease in litter amount suggests that the dry conditions have had a negative affect on the growing conditions which decreases the amount of litter that is produced. Soil surface resistance to erosion rated in the Moderate to Extreme category, with the soil site stability test showing a rapid melting of interspace and under plant canopy soil samples. Organic matter is lacking on this site, but this is expected for an area dominated by mesquite, as indicated by the small amount of litter present. The soil surface loss or degradation has rated out as moderate. The recent dry conditions, decreases the strength of physical crusts and or absence of soil crusts, wind velocity, surface dryness. The decreased amount of surface plant cover has possibly increased soil surface loss or degradation. The plant community composition and distribution relative to infiltration and runoff rated as moderate to extreme. The recent dry conditions or drought conditions have possibly increased the amount of conversion of grassland to shrub land which has reduced infiltration and increased runoff. The litter amount rated in the extreme category. The only litter present is mesquite leaves. The decrease in litter amount suggests that the dry conditions have had a negative affect on the growing conditions which decreases the amount of litter that is produced. Additionally, the decrease in litter amount can have the effect of increasing the amount of bare soil. All other indicators rated as none to slight or slight to moderate. Sand and gravel deposits of Quaternary pediment deposits outcrop in the area.

Wildlife - There are three sites that represent a total of 200 acres for the section 15 allotment. Biotic evaluations will be lumped in this regard, with only HW 122 being considered as 'not meeting'. This is a small 90-acre parcel adjacent to large blocks of state land. HW 121 and 122 are located at the very southern edge of the grazing allotment boundary (see map).

Evaluation of the integrity of the biotic community considered several indicators as attribute indices for the area of interest. Biotic indicators are interrelated with several other indicators, including soil/site stability, hydrologic function, and vegetation. Several indicators are singularly biotic and address the vegetative aspect of the ecological site description, such as functional/structural groups and plant mortality & decadence, as discussed above. Considering present climate regimes, indicators reflecting climatic conditions (drought) can be expected to fall within the normal range of variability. In addition to the standard worksheet biotic factors, four specific wildlife indicators and descriptors are included in this evaluation. Wildlife Habitat and Population indicators rate Slight to Moderate, although HW 122 is in declining ecological condition, it could also be rated along the same lines as with biotic factors rated for the the pasture, Moderate to Extreme. The composition of vegetation reflects current climatic conditions, e.g., drought for the past several years and past land use. Range site production and cover of a variety of preferred plant species for wildlife, such as forbs and woody browse species, and the availability of seed for food and regeneration, is moderated by climate and land use, and in this area, by the bulk of land not within the administration of the BLM. Use of the land is generally left to the discretion of the landowner/state lease holder. With respect to

Special Status Species, none are known to occur in the area of interest at this time and the Habitat and Population indicators are, therefore, rated None to Slight.

It is the professional opinion of the Assessment team, that the public land within BM and HW121 pastures on the L A Ranch meets the Upland and Biotic standards. HW122 pasture however shows little indication for adequate site protection. The Upland and Biotic standards are at high risk. Soil site stability, hydrologic function and biotic integrity attributes indicate significant departure from the ESD and/or ERA. See site notes and recommendations for further information regarding the ecological sites on this allotment.

The Pajarito-Pintura soil complex (Pb) in the HW122 pasture is a severely eroded soil that over time has lost the A and B horizions. Mesquite hummocks dominate this site with very little herbaceous plant material in the inter-spaces. Although classified as a Sandy SD-3 ecological site; it will never rate well to the attributes for this site description due to the severely eroded soils.

The (*) indicates that the assessment had one or more indicator(s) rated moderate/extreme or extreme. These indicators are:

- Bare Ground
- Gullies
- Soil Surface Resistance to Erosion
- Plant Community Composition and Distribution Relative to Infiltration and Runoff
- Functional/Structural Groups
- Litter Amount
- Annual Production
- Invasive Plants

These indicators by themselves are not enough to rate the site as not meeting a standard but may warrant future monitoring.

Recommendations: The immediate recommendation is to conduct monitoring as soon as possible on the 3 sites to gather some recent cover, production and frequency data. Twenty-seven years is too long a time frame to go without monitoring and evaluating the public on this allotment. Although there is a very low percentage of public land on the allotment, those tracts could possibly be identified for future disposal or exchange.

The upland mesquite (Prosopis glandulosa) infested site is at severe risk for not adequately meeting the standards. A more rigorous management strategy could be put into place to deal with this site. Access is a problem also in regards to this site. Brush control to reduce mesquite may be the strategy required, but the timing must be right. These tracts however may not be high priority due to their isolation and small size and

their management may not be feasible. The sites were gps'd and a witness posts were placed for ease of location.

RFOs Upland and Biotic Standard Assessment Summary Worksheet			
SITE 65056-BM147-C047			
Legal Land Desc	NWNW 8 0110S 0270E Meridian 23	Acreage	90
Ecosite	042CY007NM LOAMY SD-3	Photo Taken	Y
Watershed	13060007010 GOPHER		
Observers	NAVARRO/MCGEE	Observation Date	01/15/2003
County Soil Survey	NM666 CHAVES SOUTH	Soil Var/Taxad	
Soil Map Unit	RL	Soil Taxon Name	REEVES
Texture Class	NM666 L	Soil Phase	REEVES-HOLLOMAN
Texture Modifier	NM666 LOAM		
Observed Avg Annual Precipitation		Observed Avg Growing Season Precipitation	
NOAA Annual Precipitation	11.25	NOAA Growing Season Precipitation	7.64
NOAA Avg Annual Precipitation	13.55	NOAA Avg Growing Season Precipitation	11.18
Disturbances and Animal Use:	There was no livestock at the time of assessment.		

Part 2. Attributes and Indicators

		Departure from Ecological Site Description/Ecological Reference Areas				
Attribute	Indicators	Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S H	Rills					X
Comments:						
S H	Water Flow Patterns				X	
Comments:						
S H	Pedestals and/or Terracettes				X	
Comments						

:						
S H	Bare Ground		X			
Comments:	70-80% is the present estimated amount.					
S H	Gullies				X	
Comments:						
S	Wind-scoured, Blowouts, and/or Deposition Areas				X	
Comments:						
H	Litter Movement				X	
Comments:						
S H B	Soil Surface Resistance to Erosion				X	
Comments:	Physical crusting.					
S H B	Soil Surface Loss or Degradation				X	
Comments:						
H	Plant Community Composition and Distribution Relative to Infiltration and Runoff			X		
Comments:	Some departure.					
S H B	Compaction Layer					X
Comments:						
B	Functional/Structural Groups			X		
Comments:	Missing gramas, but there is a good diverse shrub component.					
B	Plant Mortality/Decadence				X	
Comments:						
H B	Litter Amount		X			
Comments	15-20%					

:						
B	Annual Production		X			
Comments:	1/3 of potential only.					
B	Invasive Plants			X		
Comments:	Creosote scattered.					
B	Reproductive Capability of Perennial Plants			X		
Comments:						
S	Physical/Chemical/Biological Crusts				X	
Comments:	Physical crusting evident.					
B	Wildlife Habitat				X	
Comments:	A grassland habitat type shifting toward a shrub grassland with additional impacts such as oil and gas developments and roads.					
B	Wildlife Populations				X	
Comments:	No specific wildlife population data at this time.					
B	Special Status Species Habitat					X
Comments:	None known to occur.					
B	Special Status Species Populations					X
Comments:	None known to occur.					

Part 3. Summary

A. Indicator Summary - Each of the indicators are associated with one or more of the attributes below. An indicator is placed in a category (columns) above and summed for each of the Standard Attributes.

Standard Attribute		Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S	Soil	0	1	0	7	2

H	Hydrologic	0	2	1	6	2
B	Biotic	0	2	3	5	3

B. Attribute Summary. In this table, the Extreme and Extreme to Moderate columns in the table above are merged for the *Does not Meet* column, Moderate becomes *May Need More Info*, and Slight to Moderate and None to Slight merge to form the *Meets* columns. Values from the table are summarized below. Space is provided for rationale of the determination. This space should most certainly be used when the determination by the ID team conflicts with the summarized values. Provide the sources of information that lead to the determination. X out the appropriate box for each attribute to denote final agreed upon determination by the ID team.

Attribute	Rationale	Does Not Meet	May Need More Info	Meets
Soil		1	0	9
Hydrologic		2	1	8
Biotic		2	3	8

Site Notes: This site has been gps'd and new directions enetered into the study file. This is the northernmost site and can be accessed through the highway and county road. No disturbances at the time of assessment and no livestock observed.

RFOs Upland and Biotic Standard Assessment Summary Worksheet			
SITE 65056-HW121-C048			
Legal Land Desc	SWNW 5 0120S 0270E Meridian 23	Acreage	20
Ecosite	042CY007NM LOAMY SD-3	Photo Taken	Y
Watershed	13060007040 DEXTER EAST		
Observers	NAVARRO/MCGEE	Observation Date	01/15/2004
County Soil Survey	NM666 CHAVES SOUTH	Soil Var/Taxad	
Soil Map Unit	RL	Soil Taxon Name	REEVES
Texture Class	NM666 L	Soil Phase	REEVES-HOLLOMAN
Texture Modifier	NM666 LOAM		
Observed Avg Annual Precipitation		Observed Avg Growing Season Precipitation	
NOAA Annual Precipitation	11.25	NOAA Growing Season Precipitation	7.64
NOAA Avg Annual Precipitation	13.55	NOAA Avg Growing Season Precipitation	11.18
Disturbances and Animal Use:			

Part 2. Attributes and Indicators

		Departure from Ecological Site Description/Ecological Reference Areas				
Attribute	Indicators	Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S H	Rills					X
Comments:						
S H	Water Flow Patterns				X	
Comments:						

S H	Pedestals and/or Terracettes				X	
Comments:						
S H	Bare Ground				X	
Comments:	50% falls within the range expected.					
S H	Gullies				X	
Comments:	There is some evidence of tobosa (Pleuraphis mutica) sinks.					
S	Wind-scoured, Blowouts, and/or Deposition Areas				X	
Comments:						
H	Litter Movement				X	
Comments:	Slight displacement.					
S H B	Soil Surface Resistance to Erosion				X	
Comments:						
S H B	Soil Surface Loss or Degradation				X	
Comments:						
H	Plant Community Composition and Distribution Relative to Infiltration and Runoff				X	
Comments:						
S H B	Compaction Layer					X
Comments:						
B	Functional/Structural Groups				X	
Comments:	Gramas (Bouteloua spp.) missing. Tobosa (Pleuraphis mutica) and burrograss (Scleropogon brevifolius) dominate.					
B	Plant Mortality/Decadence				X	
Comments:						

H B	Litter Amount				X	
Comments:	30% at present.					
B	Annual Production			X		
Comments:	Now 500-600 lbs/ac or kg/ha.					
B	Invasive Plants					X
Comments:	Yucca (Yucca spp.) and javelinabush (Condalia spp.) in spots.					
B	Reproductive Capability of Perennial Plants				X	
Comments:						
S	Physical/Chemical/Biological Crusts				X	
Comments:	Physical crusting evident.					
B	Wildlife Habitat				X	
Comments:	Grassland habitat with a few special habitat features such as small sinks.					
B	Wildlife Populations				X	
Comments:	No specific wildlife population data at this time.					
B	Special Status Species Habitat					X
Comments:	None known to occur.					
B	Special Status Species Populations					X
Comments:	None known to occur.					

Part 3. Summary

A. Indicator Summary - Each of the indicators are associated with one or more of the attributes below. An indicator is placed in a category (columns) above and summed for each of the Standard Attributes.

Standard Attribute		Extreme	Moderate to	Moderate	Slight to Moderat	None to

			Extreme		e	Slight
S	Soil	0	0	0	8	2
H	Hydrologic	0	0	0	9	2
B	Biotic	0	0	1	8	4

B. Attribute Summary. In this table, the Extreme and Extreme to Moderate columns in the table above are merged for the *Does not Meet* column, Moderate becomes *May Need More Info*, and Slight to Moderate and None to Slight merge to form the *Meets* columns. Values from the table are summarized below. Space is provided for rationale of the determination. This space should most certainly be used when the determination by the ID team conflicts with the summarized values. Provide the sources of information that lead to the determination. X out the appropriate box for each attribute to denote final agreed upon determination by the ID team.

Attribute	Rationale	Does Not Meet	May Need More Info	Meets
Soil		0	0	10
Hydrologic		0	0	11
Biotic		0	1	12

Site Notes: This site was located and gps'd. New directions were entered into the study file. Production is higher than expected considering the recent drought. The site is also located next to a reclaimed state well and looks well vegetated. Photographs were also taken and witness t-post was put into place.

RFOs Upland and Biotic Standard Assessment Summary Worksheet			
SITE 65056-HW122-C049			
Legal Land Desc	NENE 4 0100S 0270E Meridian 23	Acreage	90
Ecosite	042CY004NM SANDY SD-3	Photo Taken	Y
Watershed	13060007010 GOPHER		
Observers	NAVARRO/MCGEE	Observation Date	01/15/2004
County Soil Survey	NM666 CHAVES SOUTH	Soil Var/Taxad	
Soil Map Unit	Pb	Soil Taxon Name	PAJARITO
Texture Class	NM666 FSL	Soil Phase	PAJARITO-PINTURA
Texture Modifier	NM666 FINE SANDY LOAM,ER		
Observed Avg Annual Precipitation		Observed Avg Growing Season Precipitation	
NOAA Annual Precipitation	11.25	NOAA Growing Season Precipitation	7.64
NOAA Avg Annual Precipitation	13.55	NOAA Avg Growing Season Precipitation	11.18
Disturbances and Animal Use:	No grazing at this time. However the amount of bareground between mesquite (Prosopis glandulosa) plants, suggests sheet erosion.		

Part 2. Attributes and Indicators

		Departure from Ecological Site Description/Ecological Reference Areas				
Attribute	Indicators	Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S H	Rills					X
Comments:						
S H	Water Flow Patterns				X	
Comments:						

S H	Pedestals and/or Terracettes				X	
Comments:						
S H	Bare Ground	X				
Comments:	Large patches of bareground. 90-100% is the estimate from observers present. There is virtually no other ground cover except for mesquite plants and the occasional annual forb or grass.					
S H	Gullies		X			
Comments:	Eastern fringe show active gullying and headcuts into the soil profile.					
S	Wind-scoured, Blowouts, and/or Deposition Areas			X		
Comments:	Coppice dunes formed by mesquite.					
H	Litter Movement			X		
Comments:	Most of movement is by mesquite litter.					
S H B	Soil Surface Resistance to Erosion		X			
Comments:	Soil ped readily degrades.					
S H B	Soil Surface Loss or Degradation			X		
Comments:	Pebbles and small rock can be observed.					
H	Plant Community Composition and Distribution Relative to Infiltration and Runoff		X			
Comments:						
S H B	Compaction Layer				X	
Comments:	The roads may cause a slight problem. The location was found by meandering through mesquite dunes.					
B	Functional/Structural Groups	X				
Comments:	Virtually no diversity.					
B	Plant Mortality/Decadence				X	
Comments	The only plant alive is mesquite. The evidence of past perennial grass cover					

:	is at least 2-3 years old.					
H B	Litter Amount	X				
Comments:	The only litter is from mesquite. 5% is the estimate except on patches with no ground cover. No mulch whatsoever can be observed. Termites have utilized whatever other litter was present.					
B	Annual Production	X				
Comments:	There is no production.					
B	Invasive Plants	X				
Comments:	Mesquite dominating.					
B	Reproductive Capability of Perennial Plants			X		
Comments:	There is no perennial grass to reproduce. The retrogression has onlt limited the soil's ability to harbour seed.					
S	Physical/Chemical/Biological Crusts				X	
Comments:						
B	Wildlife Habitat				X	
Comments:	A desertifying grassland habitat shifting to shrub-dominated landscape. Note that the area of interest is at the edge of the grazing allotment and bound by State Trust Lands. The small parcel of public land is subject to the predominant land use.					
B	Wildlife Populations				X	
Comments:	No specific wildlife population data at this time, expect a downward trend in general wildlife populations due to the above indicator ratings affecting wildlife and wildlife habitat.					
B	Special Status Species Habitat					X
Comments:	None known to occur.					
B	Special Status Species Populations					X
Comments:	None known to occur.					
Part 3. Summary						
A. Indicator Summary - Each of the indicators are associated with one or more of the						

attributes below. An indicator is placed in a category (columns) above and summed for each of the Standard Attributes.

Standard Attribute		Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S	Soil	1	2	2	4	1
H	Hydrologic	2	3	2	3	1
B	Biotic	4	1	2	4	2

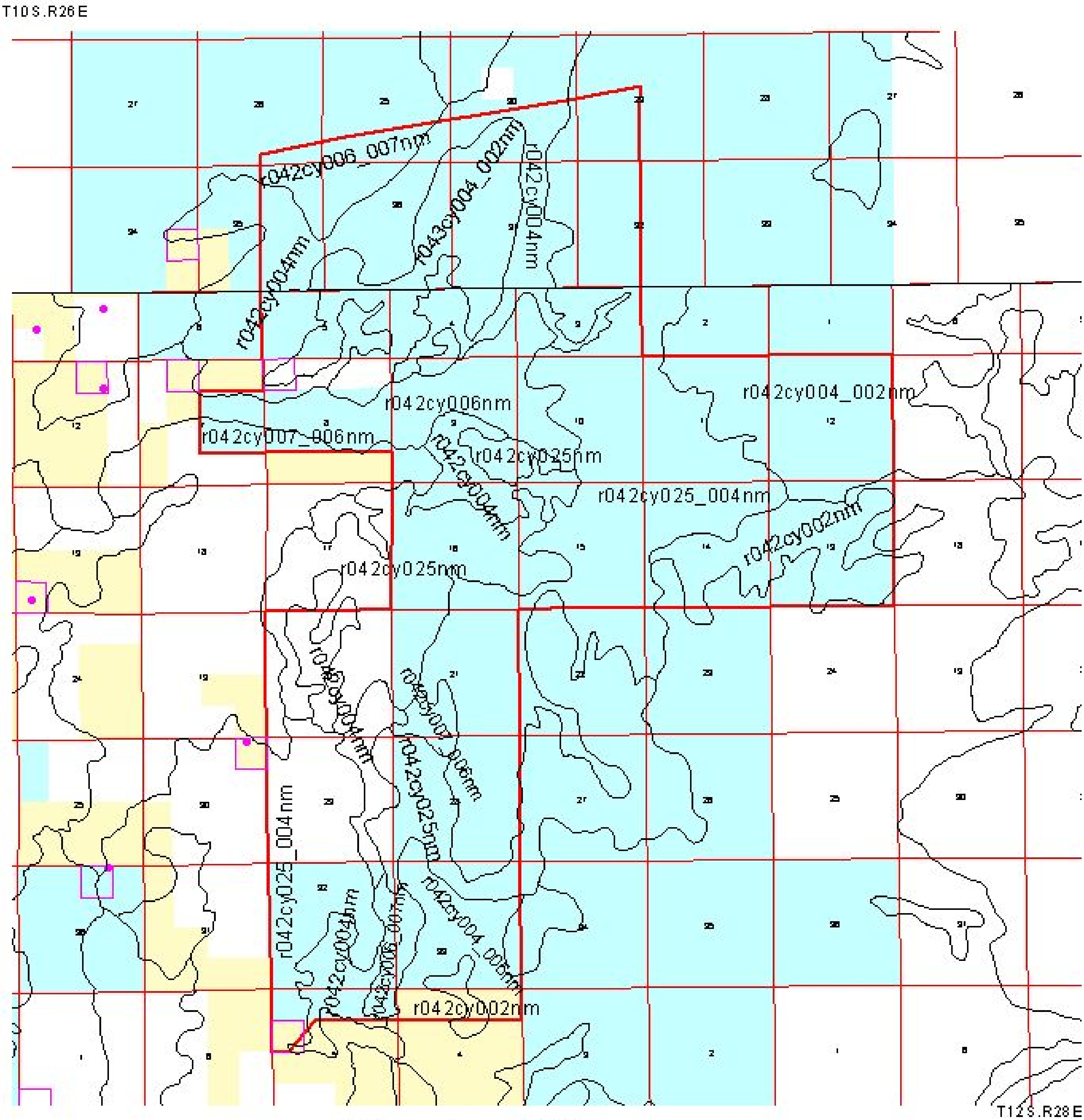
B. Attribute Summary. In this table, the Extreme and Extreme to Moderate columns in the table above are merged for the *Does not Meet* column, Moderate becomes *May Need More Info*, and Slight to Moderate and None to Slight merge to form the *Meets* columns. Values from the table are summarized below. Space is provided for rationale of the determination. This space should most certainly be used when the determination by the ID team conflicts with the summarized values. Provide the sources of information that lead to the determination. X out the appropriate box for each attribute to denote final agreed upon determination by the ID team.

Attribute	Rationale	Does Not Meet	May Need More Info	Meets
Soil	Several indicators are displaying a large degree of departure from the ESD. The Pajarito-Pintura soil complex (Pb) in the HW122 pasture is a severely eroded soil that over time has lost the A and B horizions. Mesquite hummocks dominate this site with very little herbaceous plant material in the inter-spaces. Although classified as a Sandy SD-3 ecological site; it will never rate well to the attributes for this site description due to the severely eroded soils.	3	2	5
Hydrologic	Several indicators are displaying a large degree of departure from the ESD. The Pajarito-Pintura soil complex (Pb) in the HW122 pasture is a severely eroded soil that over time has lost the A and B horizions. Mesquite hummocks dominate this site with very little herbaceous plant material in the inter-spaces. Although classified as a Sandy SD-3 ecological site; it will never rate well to the attributes for this site description due	5	2	4

	to the severely eroded soils.			
Biotic	The biotic component is missing from this site. There is no perennial grass or perennial forb component. There is a severe lack of diversity here in regards to plants. Mesquite (Prosopis glandulosa) is dominating. No mulch can be observed. It will take a long time before this site recovers if at all. The Pajarito-Pintura soil complex (Pb) in the HW122 pasture is a severely eroded soil that over time has lost the A and B horizions. Mesquite hummocks dominate this site with very little herbaceous plant material in the inter-spaces. Although classified as a Sandy SD-3 ecological site; it will never rate well to the attributes for this site description due to the severely eroded soils.	5	2	6
Site Notes:				

Rangeland Health Assessment
Ecological Sites

Allotment 65056



0.7 0 0.7 Miles

Public

Study Plots

State

Private

Study Locations

Ecological Site Boundary

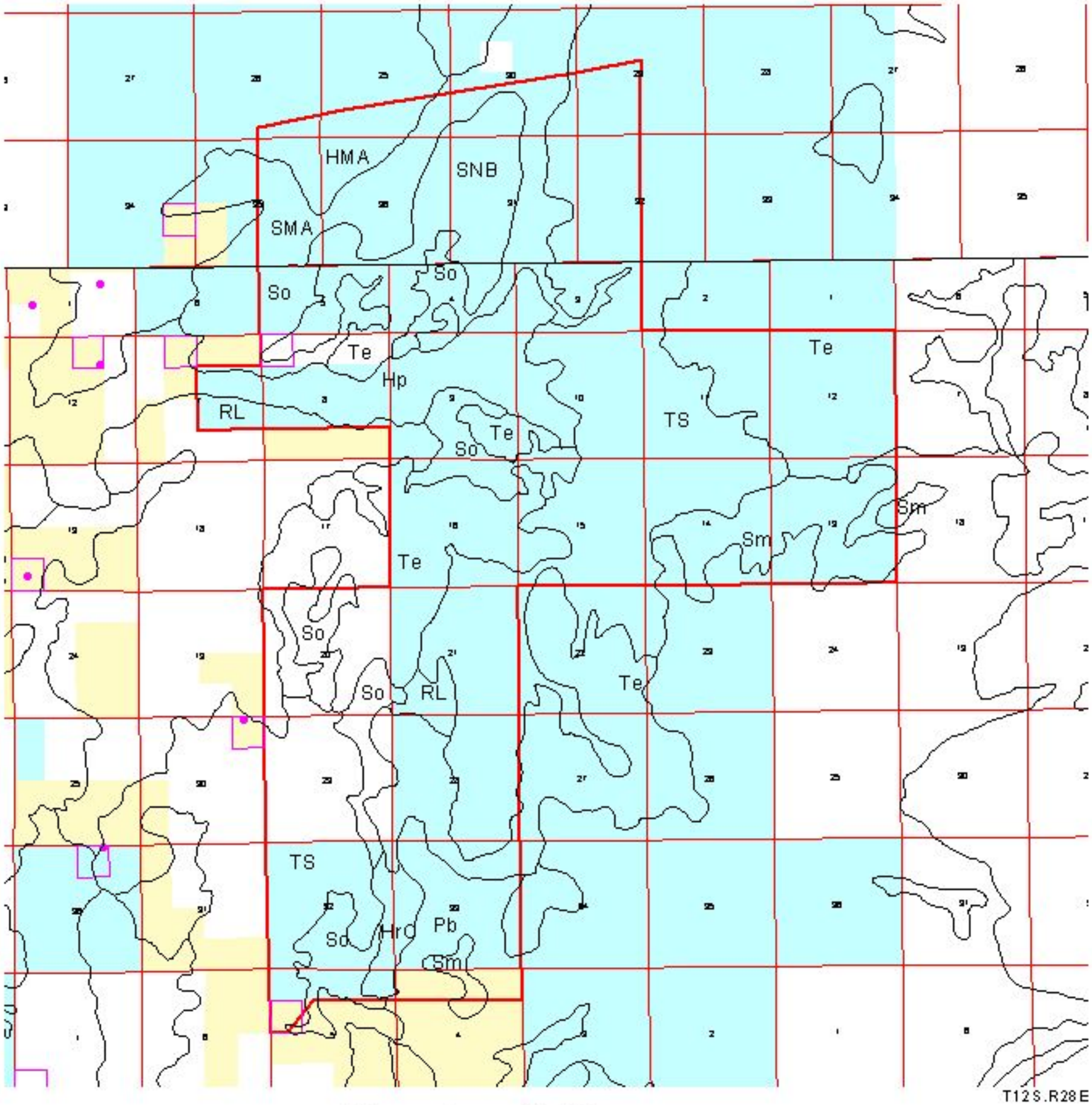
Allotment Boundary

Produced by the Roswell Field Office
GIS Intern on July 9, 2003.

Rangeland Health Assessment
Soil Mapping Units

Allotment 65056

T10S.R26E



T12S.R28E

0.7 0 0.7 Miles

Public

Study Plots

State

Private

Study Locations

Soil Mapping Boundary

Allotment Boundary

Produced by the Roswell Field Office
GIS Intern on July 9, 2003.